

NATIONAL INSTITUTES OF HEALTH
WARREN GRANT MAGNUSON CLINICAL CENTER
NURSING DEPARTMENT

Standard of Practice: Care of the Patient with Percutaneous Nephrostomy Tubes and Nephro-Uretero Stents

Essential Information

- A nephrostomy tube is placed directly into the renal pelvis of the kidney. The nephrostomy tube exits through the skin of the back and is attached to a collection bag.
- A Nephro-Ureto stent is placed directly into the renal pelvis of the kidney. It has an internal tube ending in the bladder and an external tube exiting through the skin of the back that is attached to a collection bag.
- Nephrostomy tubes are flushed to prevent clotting and to determine device patency when there is absence of urine or when there is new evidence of clots or blood in the urine output. A medical order is required. Nephrostomy flush volumes are usually 5 - 10 mL preservative-free 0.9% sodium chloride, i.e., the capacity of the renal pelvis. In some situations, a Licensed Independent Prescriber (LIP) may recommend flushing with larger amounts.
- Aspiration of fluid from the nephrostomy tube is not recommended. Gravity is recommended for obtaining specimens. Urine specimens are collected into new sterile collection bags.

I. ASSESSMENT

- A. Immediately upon return from the insertion procedure, a nurse
 1. Reviews the medical orders which may include nephrostomy tube flushes including preservative-free solution, volume, and frequency, analgesics, and assessment of vital signs, and intake & output (determine with LIP minimum urine output).
 2. Assesses the nephrostomy tube type, size, location, and external catheter length against the information recorded on the form, Report of Performance of Radiological Procedure, NIH # 2738.
- B. Temperature is measured every 8 hours.
- C. Every 4 hours for the first 24 hours:
 1. Incontinence and urinary bladder emptying is assessed by inspection and palpation of abdomen over the suprapubic area.
 2. Bladder spasms and need for anti-spasmodic medications every 4 hours for patients with nephro-ureto stents.
- D. Every 4 hours for the first 24 hours post-insertion and then, every 8 hours:
 1. Dressing is assessed for drainage and integrity
 2. Nephrostomy tubing is assessed for kinks, stability (securing with tape or security devices to prevent tension on the tube and/or migration.
 3. Drainage collections system is assessed for secure connections, positioning below level of kidneys.
 4. Urine output (including nephrostomy tube, bladder, and incontinent episodes) and urine quality, ex., color, blood or clots, stones, sediment, and odor.
- E. Every 24 hours and with dressing changes, the exit site is assessed for redness, edema, tenderness, and discharge.
- F. Discharge planning assessments should consider the need for home care, required supplies and follow-up visits, and written instructions.

II. INTERVENTION

- A. Analgesics are administered as needed.
- B. Fluid intake is encouraged every 8 hours unless contraindicated by patient's clinical condition.
- C. Showers are permitted 24 hours post-insertion, if there are no complications.
- D. Dressings
 - 1. Gauze dressings are changed every 24 hours. Transparent dressings are changed every 72 hours and whenever the dressing is compromised.
 - 2. Dressings and nephrostomy tube exit sites are protected with a waterproof covering during showers for at least 14 days. Generally after 14 days, and if there are no complications post-PNT placement, the site may be left uncovered when showering.
- E. Drainage bags are:
 - 1. Changed every 48 hours while hospitalized or more frequently if clots, stones, or sediment are present.
 - 2. Kept below the level of the kidneys to prevent reflux
 - 3. Emptied prior to showering and a belt is used to secure the drainage bag while in the shower.
- F. Nephrostomy Tube is secured with tape or securing device to prevent tube migration and traction on the tube.
- G. Urine specimens are collected from the nephrostomy tube by gravity and **not** by aspiration.
- H. Nephrostomy tubes are flushed per medical orders using a 3-way stopcock. (PRO: Percutaneous Nephrostomy Tube Care)
- I. Notify the Licensed Independent Prescriber (LIP) for complications such as:
 - a. Changes in assessment of nephrostomy tube exit site, i.e., redness, edema, tenderness, or discharge
 - b. Inability to flush nephrostomy tube
 - c. Decreased urine output and/or changes in the quality of the urine, i.e., increased bleeding, clots, stones, sediment, or odor
 - d. Incontinence or inadequate bladder emptying
 - e. Inadequate pain control, nausea, or vomiting
 - f. Fever
 - g. Accidental dislodgement
- J. Provide patient/family instruction encouraging a demonstration of required care procedures.
- K. Initiate Wound Ostomy consultation as needed

III. DOCUMENTATION

- A. Assessments and interventions at least every 8 hours including:
 - 1. Vital signs
 - 2. Dressing changes
 - 3. Integrity of drainage system
 - 4. Intake and output including urine quality
 - 5. Specimens collected
 - 6. Teaching

IV. REFERENCES

- A. NIH/CC Nursing & Patient Care Services PRO: Percutaneous Nephrostomy Tube Care (2003).
- B. NIH/CC Nursing & Patient Care Services “Caring for Your Percutaneous Nephrostomy tube (2003).
- C. Gray, M., Cluff, D., Johnson, V., Dixon, L., & Wasson, D. (2001). Urinary diversions: perspectives on nursing care, Perspectives, 2(2): 1-8.
- D. Karlowicz, K., “Obstructions and Infection of the Genitourinary Tract” and “The Pediatric Urology Patient”, Urologic Nursing Principles and Practice, W.B. Saunders, Philadelphia, pp. 121-124, 596-597.
- E. Bates, B. A. (1995) Guide to Physical Examination, J.B. Lippincott Co. Philadelphia, pp. 335-6, 339-340.

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